

## Harlequin Color Change in a New Born

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### Abstract

Harlequin color change is a benign, transient skin color change of unknown etiology sometimes seen in the neonatal period. It has been rarely reported in preterm infants. Herein, we report a case of harlequin color change developed in premature infants without any adverse consequences. During the event, infant was receiving antibiotic treatment for probable sepsis in addition to routine supportive care. Harlequin color change should be recognized properly to avoid unnecessary treatment.

### Introduction

Harlequin color change is a benign condition occasionally seen in healthy neonates<sup>1</sup>. It is a cutaneous condition seen as transient erythema of one half of body, which is very distinctly demarcated at the mid line. It resolves without any intervention in few minutes on change of posture. Association with PG E<sub>1</sub> use or in pre terms as well as low birth weight babies has been described.<sup>2,3</sup> It is being reported as the condition is rather uncommon, is benign in nature and may be confused with pathological conditions.

### Case report

A preterm 30 weeks gestation 1340g male baby was born after an uncomplicated pregnancy and delivery. Baby was on part tube feeds (expressed breast milk) and part intravenous fluids. Baby was also on antibiotics (ampicillin + gentamicin) for first 5 days for probable neonatal sepsis. On d4 of life, a peculiar unilateral erythema was noticed with contralateral pallor which had a striking demarcation at mid line. The demarcation was most striking over the chest. (Fig. 1) It resolved in 30 minutes of its own on the change of posture by placing the erythematous side up. The condition reappeared transiently several times over next 24 h and then completely disappeared.



**Fig. 1:** Clear demarcation of the color difference at mid line over the chest and abdomen

### Discussion

Harlequin color change, also known as harlequin sign is a benign condition where in infant appears pale on one side and flushed on other side with distinct border in the midline. It is a benign transient condition that sometimes appears alarming and is due to vasomotor tone instability in the days of life<sup>4</sup>. It is generally believed that the colour changes are not etiologically related to the concurrent medical conditions as it occurs in sick as well as normal babies<sup>5</sup>.

The condition has been only rarely reported in preterm babies<sup>6</sup>. The phenomenon may last from 20 seconds to 30 minutes<sup>7</sup> and commonly seen between d2-d5 of life but has been reported as late as 9½ months of age<sup>8</sup>. It needs differentiation from other conditions<sup>4</sup> like infantile hemangioma to avoid unnecessary work up or treatment. In particular, fears and anxieties of mothers of such babies need reassurance of the benignness of the condition. It specifically needs to be differentiated from a severe condition—harlequin fetus which is severe form of ichthyosis.

Neligan and Strang<sup>7</sup> reported and named this condition first in 1952. The word harlequin is derived from Italian *arlecchino* or Old French *Herlequin*, *Hellequin*. It is best known for comic characters of Italian *Commedia del'arte* in late sixteenth century.

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